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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/819,291	03/28/2001	Kiyoshi Ozaki	1508.65377	6868

7590 07/12/2005
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EXAMINER

NGUYEN, HOAN C

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/819,291

Applicant(s)

OZAKI ET AL.

Examiner

HOAN C. NGUYEN

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-39 is/are pending in the application.
- 4a) Of the above claim(s) 7-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02 May 2005 has been entered.

Applicant added new claim 39.

Response to Amendment

Applicant's arguments based on the Response filed on 20 May 2004 have been considered but are moot in view of the same ground(s) of rejection. Therefore, this is Final action.

Response to Arguments

Regard to the Election/Restriction Requirement places on claims 1 and 3, claim 1 cites that "the steps of forming first and second conductive films (209 and 211) connecting to pixel electrode according to Figure 16 and claim 3 cites the steps of forming a (single) conductive 231 according to Figure 18. Therefore, the repairing method in claim 1 is different and not related to the repairing method in claim 3. However, the search may

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be not a serious burden; therefore, claims 1-5 and 39 will be considered in this office action.

In order to reject new claim 39, the new reference will replace to the old reference of Henley. Therefore, the response to arguments based on Henley is not needed.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 3 and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoshiharu (JP03-171512).

In regard to claim 1, Yoshiharu teaches (Fig. 1) a fault repairing method for a liquid crystal display device, comprising the steps of:

- forming first and second disconnection repairing contact holes 3, that have a width larger than a width of a disconnected wiring and a depth so as to expose an upper surface and both side surfaces of the disconnected wiring within the contact holes 3 respectively, at two locations which are positioned to sandwich a disconnected portion of the disconnected wiring as Fig. 1 shown; and
- forming first conductive film 1 to repair data lines and forming second conductive film 2 to repair gate lines, that is connected electrically to the upper surface and

both side surfaces, on inner walls and surfaces of the first and second disconnection repairing contact holes to repair the disconnection, wherein a direction of the width for the disconnected wiring, the contact holes and a repairing conductor is the same at one location (claim 39).

In regard to claim 3, Yoshiharu teaches (Fig. 1) a fault repairing method for a liquid crystal display device, comprising the steps of:

- forming first and second disconnection repairing contact holes 3, that have a width larger than a width of a disconnected wiring and a depth to expose an upper surface and both side surfaces of the disconnected wiring respectively, at two locations which are positioned to sandwich a disconnected portion of the disconnected wiring as Fig. 1 shown; and
- forming a conductive film 1, that is connected electrically to the upper surface and both side surfaces, on inner walls and surfaces of the first and second disconnection repairing contact holes to repair the disconnection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshiharu (JP03-171512) as applied to claims 1 and 3 above, in view of Imura et al. (US6239856B1).

Yoshiharu fails to disclose the conductive film formed by a laser CVD method.

Imura et al. teach (col. 7 lines 8-13) the conductive film formed by a laser CVD method.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify a fault repairing method for a liquid crystal display device as Yoshiharu disclosed with conductive film formed by a laser CVD method for precipitating a metal thin film by irradiating metal with laser light as taught by Imura et al. (col. 7 lines 8-10).

3. Claims 1, 2, 5 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshiharu (JP03-171512) in view of Yamamoto et al. (US5600460A).

In regard to claim 1, Yoshiharu teaches (Fig. 1) a fault repairing method for a liquid crystal display device, comprising the steps of:

- forming first and second disconnection repairing contact holes 3, that have a width larger than a width of a disconnected wiring and a depth so as to expose an upper surface and both side surfaces of the disconnected wiring within the contact holes 3 respectively, at two locations which are positioned to sandwich a disconnected portion of the disconnected wiring as Fig. 1 shown; and
- forming first and second conductive films 1 to repair data lines/gate lines, that is connected electrically to the upper surface and both side surfaces, on inner walls

and surfaces of the first and second disconnection repairing contact holes to repair the disconnection,

Yoshiharu fails to disclose a fault repairing method with forming first and second conductive films, wherein both the first and second conductive films are formed by a laser CVD method (claim 2) and both the first and second conductive films are connected to a pixel electrode (claim 5).

Yamamoto et al. teach (Fig. 28, abstract), for providing easy and reliable method of repairing, a fault repairing method with forming first and second conductive films, wherein both the first and second conductive films are formed by a laser CVD method and both the first and second conductive films are connected to a pixel electrode.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify a fault repairing method for a liquid crystal display device with limitations in claims 2 and 5 for providing easy and reliable method of repairing as taught by Yamamoto et al. (abstract).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HOAN C. NGUYEN whose telephone number is (571)

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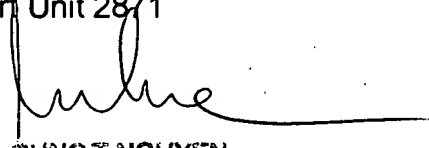
272-2296. The examiner can normally be reached on MONDAY-THURSDAY:8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim H. Robert can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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HOAN C. NGUYEN
Examiner
Art Unit 2871



DUNG T. NGUYEN
PRIMARY EXAMINER